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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,380	07/02/2003	Peter Willimowski	854G-000160	3696

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EXAMINER

CHU, HELEN OK

ART UNIT	PAPER NUMBER
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1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/612,380	Applicant(s) WILLIMOWSKI ET AL.	
	Examiner Helen O. Chu	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's Amendments have been received on March 20, 2007. Claims 1-8, 34 have been amended.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 20, 2007 has been entered.

Claim Rejections - 35 USC § 112

4. The rejections under 35 U.S.C. 112, first paragraph, on claims 1 and 34 are withdrawn because Applicant has amended the claims.
5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-10, 34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

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which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitation "a third flow path connecting an outlet of said first anode section to an outlet of said second anode section without passing through an anode section" is considered new matter because in Figure 1 and 5, the third flow path is denoted by component 52. Component 52 has arrows indicating the flow is going into and out of the anode section.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10, 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation "operational state" is unclear to the Examiner. The specification does not clearly convey the meaning of an operational state. For purposes of compact prosecution the Examiner will interpret the term "operational state" as when the valve is opened

Claims Analysis

7. The term "operational state" is interpreted as the valve to be fully opened which would not impede flow communication

8. The term "venting" is to discharge.

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9. The term "effluent" is something that flows out and forth. The term "valve" is any device that would regulate the flow of a fluid.

10. Therefore, any device that can function the same way is a valve.

Claim Rejections - 35 USC § 102

11. The rejections under 35 U.S.C 102 (e), on claims 1-8, 10 and 34, as anticipated by Shafer are withdrawn because Applicant amended the claims

12. The rejections under 35 U.S.C 102 (e), on claims 1,5-8 and 10, as anticipated by Faris et al. are withdrawn because Applicant amended the claims

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1-9, 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheron (US Patent 4,243,731).

Regarding claims 1, 2, 4, 6, 8, 9, 34, the Cheron reference discloses a fuel cell stack (Figure 1, Component 1) with hydrogen supplying the inlets (Column 3, Lines 15-25) of the fuel cells and discharged to the outlets. Each inlet comprises a valve, which regulates the flow of the hydrogen (Applicant's first, second and fourth flow paths and

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respective valves), and the hydrogen discharge joins to one flow path and a discharge valve (Applicant's third flow path and valve, Figure 8). It is inherent that hydrogen is supplied to the anode section of the fuel cell and if there are "n" numbers of fuel cells there must be also "n" numbers of cathodes

In regard to claims 3, 5, 7, the valves are proportional control valves which monitors the flow rate dependent on pressure (Column 4, Lines 36-45)

15. Claims 1-9, 34 rejected under 35 U.S.C. 102(e) as being anticipated by Skala et al. (US Patent 6,911,277)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 2, 4, 6, 8, 9, 34, the Skala reference discloses a fuel cell stack with inlets and an outlet that controls the fuel flow into and out of the fuel cell (Column 1-2, Lines 63-5). Hydrogen enters each inlet with valves (Figure 8, component 72a-72c) and exits a common discharge flow path and discharge valve (Applicant's third flow path and valve (Figure 8, Components 78 and 74e respectively).

In regard to claims 3, 5, 7, the Skala reference discloses that these are proportional valves by putting sensors at the inlets and outlets to measure the pressure

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drop across the fuel cell and allows the flow path to be configured accordingly (Columns 3-4, lines 65-5).

Claim Rejections - 35 USC § 103

16. The rejection under 35 U.S.C 103 (a), on claim 9, as unpatentable by Shafer is withdrawn because Applicant amended the claims.

17. The rejection under 35 U.S.C 103 (a), on claim 9, as unpatentable by Faris is withdrawn because Applicant amended the claims.

18. Claim 10 is rejected under 35 U.S.C. 103(a) as being obvious by Cheron (US Patent 4,243,731)

The Cheron reference discloses the claimed invention except for each anode sections are from a different fuel cell stack. It would have been obvious to one having ordinary skill in the art at the time the invention was made to separate the fuel cell stack, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ. 177, 179.

19. Claim 10 is rejected under 35 U.S.C. 103(a) as being obvious by Skala et al. (US Patent 6,911,277)

The Skala et al. reference discloses the claimed invention except for each anode sections are from a different fuel cell stack. It would have been obvious to one having ordinary skill in the art at the time the invention was made to separate the fuel cell stack, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ. 177, 179.

Response to Arguments

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22. Applicant's arguments with respect to claims 1-10, 34 have been considered but are moot in view of the new ground(s) of rejection.

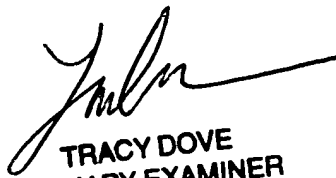
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen O. Chu whose telephone number is (571) 272-5162. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HOC


TRACY DOVE
PRIMARY EXAMINER

4/07